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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/681,138

10/09/2003

Mitsunobu Niwa

2635-184

6457

23117 7590 04/05/2007
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EXAMINER

OLSEN, KAJ K

ART UNIT

PAPER NUMBER

1753

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/681,138

Applicant(s)

NIWA, MITSUNOBU

Examiner

Kaj K. Olsen

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10-9-03;10-11-06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawase et al (USP 6,453,724).

3. Kawase discloses a gas concentration detecting apparatus comprising a gas concentration sensor including a first cell 110 having a solid electrolyte and a pair of electrodes (111, 112) disposed around the electrolyte for pumping out and in oxygen of a gas to be detected, a second cell 120 having a solid electrolyte and a pair of electrodes (121, 122) disposed around that electrolyte for detecting a concentration of a specific gas component of the said gas after passing through the first cell with an oxygen concentration signal being outputted on the basis of current flowing through the first cell and a specific gas concentration signal being outputted on the basis of a current flowing in the second cell. See fig. 4B, 4C, and col. 7, l. 50 through col. 8, l. 8.

With respect to the various limitations about the decision on activation, these various limitations are not describing any further structure of the device, but merely defining how the device is to be utilized. Hence, all the limitations concerning the decision of activation are merely the intended use and the intended use need not be given further due consideration in determining patentability.

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4. However, it is noted that Kawase discloses an embodiment where the decision of activation is first made with the first cell (i.e. the pump cell) and then a delay is executed before the second cell (i.e. the sensor cell) is considered to be activated. See fig. 17-19 and col. 17, ll. 25-40. In other words, at time t11, the temperature of the pump cell reaches 600°C and the flag for the pump cell (FPS) is set to 1, indicating that the pump cell is considered to be activated. After FPS is set to 1, a 30 second delay is executed before the sensor cell is considered to be activated (i.e. flag FSS is set to 1). This would appear to be equivalent to what the instant invention is doing, namely utilizing a first decision of activation from one cell and having the second decision of activation be some predetermined time period from the first decision. Hence, even if the applicant's claim language included this decision of activation in a positively recited manner, Kawase would appear to still read or render obvious much of the instant invention.
5. With respect to the third cell, see reference cell 430 in fig. 35 and col. 27, ll. 6-19.
6. With respect to the element resistance detecting means, see col. 13, ll. 32-45. Again, the examiner notes that most of the limitations drawn to how this element resistance detecting means is being utilized is merely the intended use of the device and the intended use need not be given further due consideration in determining patentability. However, in the middle of the activation (i.e. between t11 and t12 in fig. 19), Kawase does utilize feedback control based on the resistance of the pump cell. See col. 17, ll. 25-40.
7. With respect to the means for implementing energizing control on a heater, see fig. 12. With respect to the specified use of the heater control, that is only the intended use of the apparatus and the intended use need not be given further due consideration in determining patentability.

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8. With respect to the various elapsed times, that is only the intended use of the apparatus and the intended use need not be given further due consideration in determining patentability.

9. With respect to the use of the third cell for the decision about the second cell reaching activation, that is only the intended use of the apparatus and the intended use need not be given further due consideration in determining patentability.

10. With respect to how the predetermined time is determined, that is only the intended use of the apparatus and the intended use need not be given further due consideration in determining patentability.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaj Olsen whose telephone number is (571) 272-1344. The examiner can normally be reached on Monday through Friday from 8:00 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen, can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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April 2, 2007

A handwritten signature in black ink, appearing to read 'Kai K. Olsen', with a stylized, flowing script.

**KAI K. OLSEN
PRIMARY EXAMINER**